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APPLICATION NO.	F	ILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
09/905,039		07/12/2001	Gary A. Demos	07314-013001	2223	
20985	7590	04/05/2004		EXAMINER		
FISH & RI		•	LEE, Y YOUNG			
12390 EL C SAN DIEGO				ART UNIT PAPER NUMBER		
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				DATE MAILED: 04/05/2004	14	

Please find below and/or attached an Office communication concerning this application or proceeding.

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. Extensions of time may be available under the provisions of 37 CFR 1,136(a). In no event, however, may a reply be timely filed after SIX (8) MONTHS from the mailing date of this communication. If the period for reply is expedited above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely. If NO period for reply is expedited above is the maximum statutory period will apply and will expire SIX (8) MONTHS from the mailing date of this communication. Failure to reply within the set or extended period for reply will. by statute, cause the application to become ABANDONETIC (31 U.S. C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any serred patent term adjustment. See 37 CFR 1.704(b). Status 1) Responsive to communication(s) filed on 22 March 2004. 2a) This action is FINAL. 2b) This action is non-final. 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) Claim(s) 1-87 is/are pending in the application. 4a) Of the above claim(s) 1-7,16-36,45-65 and 74-87 is/are withdrawn from consideration. 5) Claim(s) is/are allowed. 6) Claim(s) is/are allowed. 6) Claim(s) is/are objected to. 8) Claim(s) are subject to restriction and/or election requirement. Application Papers 9) The specification is objected to by the Examiner. 10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).										
Examiner		Application No.	Applicant(s)							
The MAILING DATE of this communication appears on the cover sheet with the correspondence address − Period for Reply A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. Extensions of time may be available under the provisions of 37 CPR 1.136(g). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. If the period to reply specified above, it is nationally control to reply specified above, it is nationally control to reply specified above it less than this (70) days, a reply within the statutory minimum of thirty (30) days will be considered timely. If the period to reply specified above, it is nationally control to reply specified above, it is nationally specified will apply and well expire SIX (6) MONTHS from the mailing date of this communication. If the period to reply within shaped above, it is nationally apply and well expire SIX (6) MONTHS from the mailing date of this communication, even if timely filed, may reduce any examined patent term adjustment. See 37 CFR 1.704(b). Status 1) ☑ Responsive to communication(s) filed on 22 March 2004. 2a) ☐ This action is FINAL. 2b) ☑ This action is non-final. 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) ☑ Claim(s) 1-87 is/are pending in the application. 4a) Of the above claim(s) 1-7.16-36, 45-65 and 74-87 is/are withdrawn from consideration. 5 ☐ Claim(s) 1-87 is/are allowed. Claim(s) 1-87 is/are allowed. Claim(s) 8-15.37-44 and 66-73 is/are rejected. 7 ☐ Claim(s) 1-87 is/are allowed. Claim(s) 1-87 is/are allowed. Application Papers 9 ☐ The drawing(s) filed on 1-16/are: a) 1-10 accepted or b) 1-10 objected to by the Examiner. Application Papers 9 ☐ The drawing(s) filed on 1-16/are: a) 1-10 accepted or b) 1-10 objected to by the Examiner. Ap	Office Action Summan.	09/905,039	DEMOS, GARY A.							
Preiod for Reply A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. Edenains of thirm may be available under the provisions of 37 CFR 1.13(s). In no event, however, may a reply be timely filed effects (S) (MONTH'S from the mailing date of this communication. If the period for reply specified above is test than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely. If the period for reply specified above is test than three minimal points of the communication. Failure to reply within the set or extended aerial for resultably period will apply and will expire SN (6) MONTH'S from the mailing date of this communication. Failure to reply within the set or extended aerial for resultably period will apply and will expire SN (6) MONTH'S from the mailing date of this communication. Failure to reply within the set or extended aerial for resultably period will apply and will expire SN (6) MONTH'S from the mailing date of this communication, even if timely filed, may reduce any carried patent term adjustment. See 37 CFR 1.704(b). Status 1) □ Responsive to communication(s) filed on 22 March 2004. 2a) □ This action is FINAL. 2b) □ This action is non-final. 3) □ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) □ Claim(s) 1-27 is/are pending in the application. 4a) Of the above claim(s) 1-7,16-36,45-65 and 74-87 is/are withdrawn from consideration. 5) □ Claim(s) 8-15,37-44 and 66-73 is/are rejected. 7) □ Claim(s) 8-15,37-44 and 66-73 is/are rejected. 7) □ Claim(s) 8-15,37-44 and 66-73 is/are rejected. 10) □ The drawing(s) filed on is/are: a) □ accepted or b) □ objected to by the Examiner. Application Papers 9) □ The provision of the priority documents have been received. 11) □ Acknowledgment is made of a claim for fore	Office Action Summary	Examiner	Art Unit							
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THE MAILING DATE OF THIS COMMUNICATION. Extensions of time may be variable under the provisions of 37 CPR 1.138(a). In no event, however, may a reply be smely filed after Six (8) MONTHS from the mailing date of this communication. If the period of reply specified above is loss that thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely. Failure to reply weight in exertificated above is loss that thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely. Failure to reply weight in exertification in the minimum date of the consumulcation is provided by the Constitution of the consumulcation of the consumulc	Period for Reply	ears on the cover sheet v	vith the correspondence address							
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 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). 	11) The oath or declaration is objected to by the Ex	aminer. Note the attache	ed Office Action or form PTO-152.							
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application from the International Bureau (PCT Rule 17.2(a)).	2. Certified copies of the priority documents	s have been received in	Application No							
	Copies of the certified copies of the prior	rity documents have bee	n received in this National Stage							
* See the attached detailed Office action for a list of the certified copies not received.		, ,,,								
	* See the attached detailed Office action for a list	of the certified copies no	t received.							
Attachment(s)	Attachment(s)									
1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413)		4) Interview	Summary (PTO-413)							
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date	2) Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No	o(s)/Mail Date							
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 5) Notice of Informal Patent Application (PTO-152) 6) Other:										

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DETAILED ACTION

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Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/22/04 has been entered.

Election/Restrictions

- 2. Applicant's election without traverse of Figure 2, claims 8-15, 37-44, and 66-73 in Paper No. 8 is acknowledged.
- 3. Claims 1-7, 16-36, 45-65, and 74-87 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected embodiment, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 8.

Claim Rejections - 35 USC § 103

- 4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 5. Claims 8-15, 37-44, and 66-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagihara (5,374,958) in view of Reininger et al (5,426,463).

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Yanagihara, in Figures 1, 11, 13, and 14, discloses substantially the same method for reducing chroma noise as specified in claims 8-15, 37-44, and 66-73 of the present invention, comprising in a YUV video image compression system utilizing a variable quantization step size q and a quantization parameter QP representing the size of the step where an increase in QP corresponds to a larger quantizing step size, selecting one of reducing chroma noise during compression of a color video image (e.g. still block) and achieving higher compression during compression of the color video image (e.g. motion block); in response to selecting reducing chroma noise, utilizing a first QP value for the Y luminance channel of a color video image (e.g. 4*SQ), and utilizing a second QP value for at least one of the U and V color channels of the color video image (e.g. 8*SQ); and in response to selecting achieving higher compression utilizing a first QP value for the Y luminance channel of a color video image (e.g. 4*SQ), and utilizing a second QP value for at least one of the U and V color channels of the color video image (e.g. 8), wherein the second QP value 8 is greater than the first QP value (e.g. 4*SQ), so that at least one of the U and V color channels has coarser quantization resolution than the luminance channel.

With respect to claims 9, 10, 13, 14, 38, 39, 42, 43, 67, 68, 71, and 72, Yanagihara also discloses that the second QP value (e.g. 8*SQ) is determined by applying a bias value 2 to the first QP value (e.g. 4*SQ); and compressing the color video image (Fig. 11), after application of the first and second QP values, to a compressed output image 13.

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It is noted Yanagihara differs from the present invention in that it fails to particularly disclose quantizing the color channels with greater resolution than the luminance channel and any decompression details as specified in claims 8-15, 37-44, and 66-73. Reininger et al however, in Figure 2, teaches the concept of such well known variable second QP value 14 is less than the first QP value (i.e. variably controlled), so that at least one of the color channels C has greater quantization resolution than the luminance channel Y; and decompressing the compressed output image (16, 17) using the first and second QP values to obtain an uncompressed video image.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, having both the references of Yanagihara and Reininger et al before him/her, to exploit the common variable bit rate quantizing method as taught by Reininger et al in the YUV video image compression system of Yanagihara in order to adaptively quantize the luminance and color channels to efficiently achieve bandwidth reduction.

Response to Arguments

6. Applicant's arguments with respect to claims 8-15, 37-44, and 66-73 have been considered but are most in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Naimpally et al discloses high-definition video encoding system having color-sensitive quantization.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Y. Lee whose telephone number is (703) 308-7584.

The examiner can normally be reached on (703) 308-7584.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (703) 305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Y. Lee

Primary Examiner
Art Unit 2613